NPDES Phase II Designation Criteria for Small Municipal Separate Storm Sewer Systems

Proposed Draft 7/27/04

Note: This document is being distributed as the first step in the public process for adopting final NPDES Phase II designation criteria for Washington State. The ten cities to which Ecology is required to apply these criteria are invited to provide Ecology with written comments by September 1, 2004. Ecology will consider those comments and revise the draft designation criteria this fall. The revised draft designation criteria will be included in the draft NPDES Phase II municipal stormwater permits for both Western and Eastern Washington and subject to the full public review and comment periods for those permits. The designation criteria will not be considered final until the NPDES Phase II municipal stormwater permits are issued.

Introduction

The U.S. Environmental Protection Agency (EPA) published the National Pollutant Discharge Elimination System (NPDES) Storm Water "Phase II" Final Rule on December 8, 1999 (64 FR68722). One component of this rule applies to operators of small Municipal Separate Storm Sewer Systems (MS4s) with discharges entering surface waters of the United States. There are three ways by which a small MS4 may be designated as a "regulated small MS4" that requires permit coverage:

- Small MS4s located within the boundaries of a U.S. Census Bureau-defined Urbanized Area based on the latest decennial census are automatically designated;
- Small MS4s that are located outside of Urbanized Areas serving jurisdictions with a population of at least 10,000 and a population density of at least 1,000 people per square mile and which meet certain criteria are to be evaluated for designation by the permitting authority: the Department of Ecology (Ecology) in Washington State;
- Small MS4s outside of Urbanized Areas that contribute substantially to pollutant loadings of a physically interconnected MS4 that is regulated by the NPDES stormwater program are to be designated.

The U.S. Census Bureau published its list of Urbanized Areas in the *Federal Register* on May 1, 2002 (67 FR 21962). Ecology notified jurisdictions on October 21, 2002 if they had been tentatively identified, according to the 2000 census, as:

- Phase II jurisdictions that were inside the Urbanized Areas; or
- Jurisdictions with populations less than 1,000 inside the Urbanized Areas; or
- Jurisdictions outside the Urbanized Areas meeting the thresholds of population of at least 10,000 and population density of at least 1,000 people per square mile.

As required by federal regulations (40 CFR 122.32), all small MS4s operated by federal, state, tribal, local or other public entities within the boundary of the Urbanized Areas defined by the U.S. Census Bureau are automatically designated as "regulated small

MS4s" and are required to seek coverage under a NPDES permit issued by Ecology for municipal stormwater discharges. Ecology may waive the requirements otherwise applicable to the regulated small MS4 if the waiver criteria outlined in 40 CFR 122.32(d) or (e) are met.

This draft document outlines the designation process and criteria Ecology proposes to use in determining whether specific small MS4s that are not automatically designated should also be designated as "regulated small MS4s" for inclusion in the NPDES Phase II stormwater permitting program.

Designation Process

Ecology intends to use the criteria for all designations of small MS4s under 40 CFR section 122.35 (b) and (c) of EPA's stormwater regulations. 122.35(b) applies at a minimum to small MS4s that are located outside of U.S. Census Bureau-defined Urbanized Areas and have a population of 10,000 or more. In addition, 122.35(b) applies to any small MS4 that contributes substantially to the pollutant loadings of a physically interconnected MS4 that is regulated by the NPDES permit program. 122.35(c) applies to petitions for the designation of a small MS4.

Ecology intends to work with all candidate MS4s to apply the designation criteria, and will consider all reasonably available information for a particular candidate MS4 prior to making a final designation decision. Sources of information include, but are not limited to: U.S. Census Bureau statistics; state-published Clean Water Act section 303(d) lists; EPA-approved TMDL analyses; endangered or threatened species listings as published by the National Marine Fisheries Service and/or U.S. Fish and Wildlife Service; other supplementary information as provided by the candidate MS4; and(or) other sources.

Ecology intends to give greater consideration to water quality considerations and overall impacts of stormwater discharges on receiving water bodies (General Designation Criteria #1 and #2) than to population characteristics or location of the MS4 (General Designation Criteria #3 and #4) in this decision-making process.

A. Small MS4s with a population over 10,000, with a density of 1,000 people per square mile, and located outside of Urbanized Areas

Ecology is required to evaluate all small MS4s meeting the population and density thresholds, and to designate those that meet the criteria as needing NPDES Phase II municipal stormwater permit coverage. Ecology will evaluate MS4s meeting these thresholds each time a NPDES Phase II municipal stormwater permit is issued.

The final designation criteria will be used to evaluate the following ten Washington cities that meet the population and density thresholds:

Aberdeen	*Oak Harbor*
Anacortes	*Port Angeles*
Centralia	*Pullman*
Ellensburg	*Sunnyside*
Moses Lake	*Walla Walla*

Ecology's initial determination of whether, according to the draft designation criteria proposed in this document, each of these cities would be a "regulated small MS4" is listed in Appendix A.

B. Small MS4s interconnected with a regulated MS4

Ecology will evaluate interconnected MS4s on a case-by-case basis to determine if they contribute substantially to the pollutant loadings of a regulated MS4 per the conditions identified in the Additional Designation Criterion below. Ecology will evaluate these MS4s each time a NPDES Phase II municipal stormwater permit is issued.

C. Public petitions for designation under 122.26(f)

Ecology will evaluate any petitions for designation against the listed criteria. Petitions must include information about each of the designation criteria listed below. Ecology will make a final determination within 180 days of receipt of a complete petition.

Designation Criteria

Ecology must consider whether stormwater discharges from a small MS4 result in, or have the potential to result in, exceedance of water quality standards, including impairment of designated uses and/or adverse habitat or biological impacts. These criteria are based on recommendations made by EPA in the Phase II rule proposal (see 63 FR 1562, January 8, 1998) and are intended to evaluate the potential or actual water quality impacts from stormwater discharges originating within populated areas.

Ecology proposes to use the following criteria as the basis for evaluating whether MS4s should be designated as a "regulated small MS4" that requires permit coverage. Ecology will make the determination on a case-by-case basis with the assistance from the jurisdictions involved.

A. General Designation Criteria:

For small MS4s with a population over 10,000, with a density of 1,000 people per square mile, and located outside of Urbanized Areas, the MS4 will be designated as a "regulated small MS4" that requires NPDES Phase II permit coverage if:

- Criterion #1 *or* Criterion #2 is met.

For small MS4s interconnected with a regulated MS4 and for public petitions for designation under 122.26(f), the MS4 will be designated as a "regulated small MS4" that requires NPDES Phase II permit coverage if:

- Criterion #1 *or* Criterion #2 is met; *and*
- Criterion #3 *or* Criterion #4 is met.

1) Does the MS4 discharge stormwater to impaired or sensitive waters?

Ecology will determine whether the MS4 discharges to impaired or sensitive waters that need protection to maintain or restore uses:

- *"Impaired waters"* are Clean Water Act section 303(d)-listed water bodies. If an EPA-approved Total Maximum Daily Load (TMDL) analysis has determined that the MS4 is not a "contributing source(s) of pollutants" then the MS4 does not meet this criterion for designation. A municipal stormwater discharge that is specifically named and required to reduce loading through an EPA-approved TMDL analysis meets this criterion for designation.
- *"Sensitive waters"* include public drinking water intakes and their designated protection areas; designated public swimming areas; shellfish beds; State-designated Outstanding Resource Waters; National Marine Sanctuaries; State

Aquatic Reserves; and waters determined to be critical habitat for threatened or endangered species.

Ecology will also consider whether stormwater management practices are likely to contribute to the necessary protective and(or) restoration measures for the water body of concern. Constituents of concern in stormwater include:

Arsenic	Oil & grease
Cadmium	Organic toxins
Copper	Sediments
Chromium	Nutrients
Lead	Oxygen demanding organics
Zinc	Heat
Bacterial/viral agents	Other pathogens

2) Is the MS4 a significant contributor of pollutants to waters of the United States?

Ecology will determine whether the activities that take place in the MS4 contribute a loading of pollutants that are considered to be sufficient to cause or exacerbate the deterioration of receiving water quality or instream habitat conditions. This determination will be made using best available science and readily available information. The types of information or metrics that may be considered and applied include:

- Water quality monitoring data;
- Landscape metrics such as total impervious surface area, road network density, or number of stream crossings by roads;
- Quantification of the vehicular traffic in the MS4 at levels that would correspond to a high pollutant loading in stormwater discharges;
- Other indications of increased potential for stormwater pollutant loading, including a large non-resident population (such as seasonal or year-round tourism, university students, adjacent military bases, or other types of commuters) or high-use commercial traffic areas.

3) Does the MS4 serve a substantial population or area?

Management of stormwater runoff from growing MS4s is a primary goal of the regulations. High growth may be measured by a rate of increase in population, or directly by the number of people added, or by the increase in the amount of impervious surfaces in the MS4. Ecology will determine whether the MS4 has experienced high growth by one or more of the following measures:

- Residential population has grown or is projected to grow by a rate of 15% (the average rate of growth in Washington State from 1990-2000) or more within a 10 year period; this applies only to MS4s serving a minimum population of 1,000.
- The MS4 is projected to serve a population of 10,000 or more outside an Urbanized Area, or a population of 1,000 or more inside an Urbanized Area, when the next census takes place.
- The amount of total impervious area served by the MS4 has increased by a rate of 10% or more within a 10 year period; this applies only to MS4s serving a minimum population of 1,000.

Ecology's determination will be based on the best available information, including the latest U.S. Census Bureau or State of Washington Office of Financial Management data, including "Population, Land Area and Density for Cities and Towns; April 1, 2000" located at *http://www.ofm.wa.gov/pop/*

4) Is the MS4 contiguously located to an Urbanized Area?
Potential impacts on a neighboring regulated municipality and shared water bodies will be considered for jurisdictions that are directly adjacent to an Urbanized Area.

B. Additional Designation Criterion: If a MS4 located outside an Urbanized Area is physically interconnected to another MS4 that is regulated by the NPDES stormwater program and contributes substantially to the pollutant loading in the regulated MS4, then it must be designated as a "regulated small MS4." Ecology will determine whether the physically interconnected MS4 contributes substantially to the pollutant loadings of the regulated MS4. The determination of whether the physically interconnected MS4 is a "substantial contributor" to the regulated MS4 will be based on the following:

- The total contributing area of the MS4 under evaluation;
- What portion of the receiving regulated MS4's discharge is contributed by the interconnected MS4 under evaluation; and(or)
- What portion of the municipal stormwater discharge to the receiving water body is contributed by the interconnected MS4 under evaluation.
- The interconnected MS4 must also meet either #1 or #2 of the General Criteria listed above.

C. Exemption Criterion: A designated "regulated small MS4" may be determined to be exempt from the requirement for permit coverage if the stormwater runoff from the MS4 is effectively addressed by other water quality programs. Ecology will consider, on a case-by-case basis, whether the stormwater runoff from a potentially designated MS4 is effectively addressed under other regulations or programs. Information in support of this criterion should be provided directly to Ecology by the candidate MS4.

Glossary

Note: This glossary is provided for informational purposes only; legal definitions of these terms can be found in the Code of Federal Regulations at 40 CFR Section 122.26(b) or in the Phase II Final Rule, published December 8, 1999 (64 FR 68722).

Municipal separate storm sewer (MS4) means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges to waters of the United States;

(ii) Designed or used for collecting or conveying stormwater;

(iii) Which is not a combined sewer; and

(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR Section 122.2.

Physically interconnected means that one MS4 is connected to a second MS4 in such a way that it allows for direct discharges to the second system. For example, the roads with drainage systems and municipal streets of one entity are physically connected directly to a MS4 belonging to another entity.

Regulated small MS4 means a MS4 which is automatically designated for inclusion in the Phase II stormwater permitting program by its location within an Urbanized Area, or by designation by the NPDES permitting authority.

Small municipal separate storm sewer systems (MS4s) means all separate storm sewers that are:

(i) Owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges to waters of the United States.

(ii) Not defined as "large" or "medium" municipal separate storm sewer systems pursuant to 40 CFR Sections 122.26 (b)(4) and (b)(7).

(iii) This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.
[40 CFR 122.26(b)(16)]

Stormwater means stormwater runoff, snowmelt runoff, and surface runoff and drainage.

Urbanized Area means that, for the year 2000 Census, the U.S. Census Bureau classified "urban" as all territory, population, and housing units located within an Urbanized Area (UA) or an Urban Cluster (UC). It delineated UA and UC boundaries to encompass densely settled territory, which consists of: core census block groups or blocks that have a population density of at least 1,000 people per square mile and surrounding census blocks that have an overall density of at least 500 people per square mile. In addition, under certain conditions, less densely settled territory may be part of each UA or UC. The U.S. Census Bureau announced the “Census 2000 Urbanized Areas” on May 1, 2002. More information can be found at the U.S. Census Bureau website at: *http://www.census.gov/geo/www/ua/ua_2k.html*

Appendix A

Census Designated City	General Designation Criteria Information considered by Ecology in initial evaluation of the MS4*		Would the city be designated under these proposed criteria?
	Criterion #1: **Does the MS4 discharge stormwater to impaired or sensitive waters?**	**Criterion #2:** **Is the MS4 a significant contributor of pollutants to waters of the U.S.?**	
Aberdeen	Inner Grays Harbor listed for sediment; *proposed* bull trout critical habitat		YES
Anacortes	Fidalgo Bay listed for chrysene, benzo(a,h)anthracene; *proposed* bull trout critical habitat	Possibly due to ferry traffic	YES
Centralia	Chehalis River listed for fecal		YES
Ellensburg	Wilson Creek listed for fecal; Yakima River listed for pH, chlordane, dioxin; *proposed* bull trout critical habitat	Possibly due to CWU	YES
Moses Lake	Moses Lake listed for pH, total PO4; Crab Creek listed for pH		YES
Oak Harbor	Shellfish beds; *proposed* bull trout critical habitat	Possibly due to Naval Air Station	YES
Port Angeles	Strait and Tumwater & Peabody Creeks listed for fecal; shellfish beds; *proposed* bull trout critical habitat	Possibly due to tourism	YES
Pullman	Palouse River listed for DO	Possibly due to WSU	YES
Sunnyside	Yakima River & Sulfur Creek listed for fecal; TMDL for lower Yakima River completed for turbidity		YES
Walla Walla	Yellowhawk, Mill, Cold, & Walla Walla Rivers listed for tempature; *proposed* bull trout critical habitat		YES

**Note: For the purposes of this initial review of information, Ecology staff reviewed the 1998 state-published, EPA-approved list and maps of impaired water bodies. Inclusion of impaired and sensitive water bodies here is based on these and other maps and information compared with jurisdictional boundaries; actual discharge points are not presently known.*